

REMARKS

The Section 112 Rejection

Claims 2, 11 and 12 were rejected under Section 112 as indefinite. These claims have been amended to be definite. Withdrawal of the Section 112 Rejection is respectfully requested.

The Section 102 Rejection

Claims 1-2, 6-12, and 16-20 were rejected under Section 102 as anticipated by Karaoguz et al. (20020059434). The Office Action asserted that Fig. 11 and paragraphs 71-81 of Karaoguz show the claimed multimode wireless device.

Applicants respectfully traverse the rejection. A Section 102 rejection requires that each and every element be disclosed in the prior art. In this case, Karaoguz relates to techniques for controlling and managing network access are used to enable a wireless communication device to selectively communicate with several wireless networks, namely 802.11 network and Bluetooth network. Specifically, page 6 of Karaoguz shows:

[0076] In FIG. 11, a chip architecture that provides this dual-mode functionality is illustrated. A dual-mode radio front-end 202 can be shared with different RF front-end and modulation rate parameters between Bluetooth and 802.11b modes of operation. To achieve a dual-mode operation, a new timing mechanism (and respective state machines) is required since both Bluetooth and 802.11b systems are time-synchronous networks. A dual-mode controller 200 as shown in FIG. 11 implements this timing mechanism and the state machines to achieve the dual-mode operation.

[0077] The dual-mode controller 200 has the following operational modes:

[0078] Bluetooth-only mode

[0079] 802.11b-only mode

[0080] Dual Bluetooth-802.11b mode

[0081] In this embodiment, all three modes are set by an external user command. In the Bluetooth-only or 802.11b-only mode, the device operates in the native Bluetooth or 802.11b mode, respectively, i.e., whichever mode the device is in the other mode would be turned off. In the dual Bluetooth-802.11b mode, Bluetooth and 802.11b baseband processors 204 and 206, respectively, time-share the dual-mode radio front-end 202 under the time-synchronous management of the dual-mode controller 200.

However, Karaoguz fails to show a number of claimed elements. First, Karaoguz fails to show the cellular radio core. The Office Action points to the dual-mode Bluetooth-802.11 radio 202 as being equivalent to the cellular core. However, cellular in the present invention relates to cell-telephone rather than either the Bluetooth or the 802.11, either of which corresponds to the short-range wireless transceiver. As noted on page 10 of the instant specification, the cell phone core 110 provides wide area network (WAN) access, while the short-range wireless transceiver core 130 (such as a Bluetooth core or an 802.11 core) supports local area network (LAN) access. In contrast, the cellular core handles Global System for Mobile Communications (GSM) protocol, the General Packet Radio Service (GPRS) protocol, or the Enhance Data Rates for GSM Evolution (Edge) protocol as claimed in claims 13-15.

Karaoguz cannot provide the long range transmission of a cellular phone and can at best provide the range of an 802.11 network which is far smaller than the range of a cell phone. This is one basis for traversing the Section 102 rejection.

Further, Karaoguz fails to show a radio sniffer, which works in conjunction with an antenna to detect radio transmission. The sniffer is an active unit, while the antenna is a passive unit. The Office Action incorrectly equates the sniffer with the antenna. Hence, this is another basis for traversing the Section 102 rejection.

Additionally, Karaoguz fails to show the claimed reconfigurable processor core coupled to the cellular radio core and the short-range wireless transceiver core. Moreover, Karaoguz fails to show a reconfigurable processor core that handles a plurality of wireless communication protocols. Here, Karaoguz shows a processor 204 to handle Bluetooth and a processor 206 to handle 802.11 baseband signals. There is no reconfigurable processor core that handles a plurality of wireless protocols.

As disclosed in the instant specification, the reconfigurable processor core 150 can include one or more processors 151 such as MIPS processors and/or one or more digital signal processors (DSPs) 153, among others. The reconfigurable processor core 150 has a bank of efficient processors 151 and a bank of DSPs 153 with embedded functions. These processors 151 and 153 can be configured to operate optimally on specific problems. For example, the bank of DSPs 153 can be optimized to handle discrete cosine transforms (DCTs) or Viterbi encodings, among others. Additionally, dedicated hardware 155 can be provided to handle specific algorithms in silicon more efficiently than the programmable processors 151 and 153. The number of active processors is controlled depending on the application, so that power is not used when it is not needed. This embodiment does not rely on complex clock control methods to conserve power, since the individual clocks are not run at high speed, but rather the unused processor is simply turned off when not needed.

There is no showing that Karaoguz has a reconfigurable processor core. At best, Karaoguz shows a number of general purpose processors 204, 206 and 212, but these processors singly or in combination is not reconfigurable.

In the instant case, the reconfigurable processor core is in a single chip with the advantage of being able to reuse computing resources for the different protocols, which is not possible for a set of chips dedicated to each protocol. Resource reuse is one of the important attributes of the reconfigurable architecture, rather than just cobbling together individual processors to handle individual protocol blocks as done in Karaoguz.

In view of the foregoing, Karaoguz cannot anticipate independent claims 1 and 11 as well as those dependent therefrom. Withdrawal of the Section 102 Rejection is requested.

The Section 103 Rejection

Claims 3-5 and 13-15 were rejected under Section 103(a) as unpatentable over Karaoguz and Pecan (6,631,259). First, these claims are allowable since they depend from allowable independent claims.

Moreover, there is no basis in the art for combining the references in the manner proposed. Per MPEP Section 2143.01:

Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." *In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

In *In re Kotzab*, the claims were drawn to an injection molding method using a single temperature sensor to control a plurality of flow control valves. The primary reference disclosed a multizone device having multiple sensors, each of which controlled an associated flow control valve, and also taught that one system may be used to control a number of valves. The court found that there was insufficient evidence to show that one system was the same as one sensor. While the control of multiple valves by a single sensor rather than by multiple sensors was a "technologically simple concept," there was no finding "as to the specific understanding or principle within the knowledge of the skilled artisan" that would have provided the motivation to use a single sensor as the system to control more than one valve. 217 F.3d at 1371, 55 USPQ2d at 1318.

In *In re Fine*, the claims were directed to a system for detecting and measuring minute quantities on nitrogen compounds comprising a gas chromatograph, a converter which converts nitrogen compounds into nitric oxide by combustion, and a nitric oxide detector. The primary reference disclosed a system for monitoring sulfur compounds comprising a chromatograph, combustion means, and a detector, and the secondary reference taught nitric oxide detectors. The examiner and Board asserted that it would have been within the skill of the art to substitute one type of detector for another in the system of the primary reference, however the court found there was no support or explanation of this conclusion and reversed.

The instant case is similar to *In re Fine* in that the Office Action asserted that it would have been within the skill of the art to integrate Karaoguz in order to work with GSM, GPRS and EDGE network protocols. In this case, there was no support or explanation of this conclusion and the rejection should be withdrawn.

The combination of references proposed in the Office Action would render the construction of the references impracticable for their intended purposes. If proposed modification would render the prior art invention being modified unsatisfactory for its

intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). In this case, there is no motivation to combine.

Moreover, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990) (Claims were directed to an apparatus for producing an aerated cementitious composition by drawing air into the cementitious composition by driving the output pump at a capacity greater than the feed rate. The prior art reference taught that the feed means can be run at a variable speed, however the court found that this does not require that the output pump be run at the claimed speed so that air is drawn into the mixing chamber and is entrained in the ingredients during operation. Although a prior art device "may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so." 916 F.2d at 682, 16 USPQ2d at 1432.). See also *In re Fritch*, 972 F.2d 1260, 23 USPQ2d 1780 (Fed. Cir. 1992) (flexible landscape edging device which is conformable to a ground surface of varying slope not suggested by combination of prior art references).

There was no reasonable expectation of success when combining the references. Evidence showing there was no reasonable expectation of success may support a conclusion of nonobviousness. *In re Rinehart*, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976) (Claims directed to a method for the commercial scale production of polyesters in the presence of a solvent at superatmospheric pressure were rejected as obvious over a reference which taught the claimed method at atmospheric pressure in view of a reference

which taught the claimed process except for the presence of a solvent. The court reversed, finding there was no reasonable expectation that a process combining the prior art steps could be successfully scaled up in view of unchallenged evidence showing that the prior art processes individually could not be commercially scaled up successfully.). *See also Amgen, Inc. v. Chugai Pharmaceutical Co.*, 927 F.2d 1200, 1207-08, 18 USPQ2d 1016, 1022-23 (Fed. Cir.), cert. denied, 502 U.S. 856 (1991) (In the context of a biotechnology case, testimony supported the conclusion that the references did not show that there was a reasonable expectation of success.); *In re O'Farrell*, 853 F.2d 894, 903, 7 USPQ2d 1673, 1681 (Fed. Cir. 1988) (The court held the claimed method would have been obvious over the prior art relied upon because one reference contained a detailed enabling methodology, a suggestion to modify the prior art to produce the claimed invention, and evidence suggesting the modification would be successful.).

Applicants have provided evidence pointing away from obviousness and in accordance with MPEP Section 2143.01:

If the examiner determines there is factual support for rejecting the claimed invention under 35 U.S.C. 103, the examiner must then consider any evidence supporting the patentability of the claimed invention, such as any evidence in the specification or any other evidence submitted by the applicant. The ultimate determination of patentability is based on the entire record, by a preponderance of evidence, with due consideration to the persuasiveness of any arguments and any secondary evidence. *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). The legal standard of "a preponderance of evidence" requires the evidence to be more convincing than the evidence which is offered in opposition to it. With regard to rejections under 35 U.S.C. 103, the examiner must provide evidence which as a whole shows that the legal determination sought to

be proved (i.e., the reference teachings establish a prima facie case of obviousness) is more probable than not.

When an applicant submits evidence, whether in the specification as originally filed or in reply to a rejection, the examiner must reconsider the patentability of the claimed invention. The decision on patentability must be made based upon consideration of all the evidence, including the evidence submitted by the examiner and the evidence submitted by the applicant. A decision to make or maintain a rejection in the face of all the evidence must show that it was based on the totality of the evidence. Facts established by rebuttal evidence must be evaluated along with the facts on which the conclusion of obviousness was reached, not against the conclusion itself. *In re Eli Lilly & Co.*, 902 F.2d 943, 14 USPQ2d 1741 (Fed. Cir. 1990).

To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

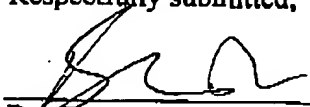
Finally, each reference, singly or in combination, does not teach or suggest all the claim limitations in the independent claims as well as each dependent claims. Since the teaching or suggestion to make the claimed combination and the reasonable expectation of success is not found in the references, there is an inference that it came from Applicants' disclosure.

CONCLUSION

Please charge the required one month late small entity fee (\$55) to Deposit account 501861.

If for any reason the Examiner believes that a telephone conference would in any way expedite prosecution of the subject application, the Examiner is invited to telephone the undersigned at (408) 528-7490.

Respectfully submitted,



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